

Patent claims

1. Paint based on at least one polymer dispersion
with pigments, fillers, thickeners, dispersants
5 and additives,
characterised in that
it contains:
a) 2-20 wt-% polymer dispersion calculated as a
solid component,
10 b) 2-35 wt-% pigments,
c) 5-60 wt-% fillers having a particle diameter
of 0.1-200 μm
15 d) 0.1-3 wt-% thickeners,
e) 0.1-2 wt-% dispersants, and
20 f) a maximum of 5 wt-% additives and water to
make up to 100%,
with the proviso that the dispersion has a
viscosity of 2.0 to $5 \cdot 10^2$ m Pa/s, the
viscosity being determined at a shear rate of
25 30,000 $\cdot 1/\text{s}$ with a capillary rheometer.
2. Paint according to claim 1, **characterised in that**
the viscosity is in the range from 3.5 to $5.0 \cdot 10^2$
m Pa/s.
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3. Paint according to claim 1 or 2, **characterised in**
that the polymer dispersion is selected from
polymers which have been obtained from the
monomers carboxylic acid vinyl esters having 3-20
35 carbon atoms, N-vinylpyrrolidone, ethylenically

unsaturated carboxylic acids, their esters, amides or anhydrides, styrene or its derivative, and/or α -olefins.

- 5 4. Paint according to claim 3, **characterised in that**
 it is a polystyrene acrylate, acrylic resin and/or
 silicone resin dispersion.
- 10 5. Paint according to one of the preceding claims,
 characterised in that the pigments are selected
 from titanium dioxide, iron oxide, chromium oxide,
 cobalt blue, phthalocyanine pigments, spinel
 pigments as well as nickel and chromium titanate,
 azoic pigments, quinacridone pigments and/or
15 dioxazine pigments.
6. Paint according to claim 5, **characterised in that**
 the pigment is titanium dioxide.
- 20 7. Paint according to one of the preceding claims,
 characterised in that the fillers have a diameter
 of between 0.1 and 100 μm and are selected from
 silicates, carbonates, fluorite, sulphates and
 oxides.
- 25 8. Paint according to one of the preceding claims,
 characterised in that the surface of the fillers
 is functionalised.
- 30 9. Paint according to one of the preceding claims,
 characterised in that the thickener is selected
 from polycarboxylates, urethane thickeners,
 polysaccharides and/or cellulose ethers.
- 35 10. Paint according to one of the preceding claims,
 characterised in that the additives are

dispersants, stabilisers, anti-foaming agents, preservatives and/or hydrophobing agents.

11. Method for applying the paint according to at least one of claims 1 to 10, using a spraying process, characterised in that the dispersion paint is led out of a reservoir via a conveying unit and a connecting line to an airless spray gun and sprayed at 55-135 bar spraying pressure measured at the spray gun.
12. Method according to claim 11, characterised in that the pressure is 70-80 bar.
13. Method according to claim 12, characterised in that a diaphragm pump is used as the conveying unit.
14. Method according to claim 12 or 13, characterised in that a temperature-controlled hose is used as the connecting line.
15. Method according to claim 14, characterised in that the temperature is so controlled that the dispersion paint has a temperature of 27-40°C, preferably 30-38°C, at the spray gun.
16. Method according to one of the preceding claims, characterised in that the airless spray gun is equipped with a double nozzle.
17. Method according to claim 16, characterised in that the double nozzle is designed in the form of two slit-like nozzle apertures arranged beside one another, preferably in a row.

18. Method according to claim 16 or 17, characterised
in that the arrangement and design of the double
nozzles is so selected that the spray jets
5 intersect in the longitudinal direction.

19. Use of the dispersion paint according to at least
one of claims 1 to 10 for applying the dispersion
paint by means of an airless method.
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